Costs and Benefits of EMTALA

Health Facilities Regulation
Working Paper No. F-1

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The authors thank Anne Farland, Takiyah Pierre, and Catherine Wu for excellent research assistance with this paper.

June 2006
Draft: Do Not Circulate without Author Permission

Section I. Introduction

Purpose

The topic of this working paper, *Costs and Benefits of EMTALA*, is part of a comprehensive study of the costs and benefits of health services regulation conducted at Duke University under contract to the Agency for Healthcare Research and Quality (AHRQ) with funding from the Assistant Secretary of Planning and Evaluation, Disability, Office of Disability, Aging, and Long- Term-Care Policy (DALTCP), is DALTCP requested the working paper for use in better understanding the overall impact of health services regulation in the U.S.

Background

Rationale

Starting in the 1960's, many states chose to enact laws requiring hospitals to provide emergency care regardless of ability to pay (Jones 1994). But in the face of rising numbers of uninsured, growing concern about whether for-profit hospitals were creating an un-level playing field (IOM 1986), and growing anecdotal evidence of "patient dumping," Congress decided to take action in 1986.

Statutory Authority

1986: The *Emergency Medical Treatment and Active Labor Act* (EMTALA)--also known as the "anti-dumping law"--was enacted as part of the Consolidated Omnibus Budget Reconciliation Act of 1985 (P.L. 99-272).[1] These requirements are contained in sections 1866(a)(1)(I) and 1867 of the Social Security Act (42 U.S.C. 1385cc and 42 U.S.C. 1395dd).

1994: The first EMTALA regulations are issued (42 C.F.R. Sec. 489.20 and Sec. 489.24).[2]

1998: In response to considerable controversy over how to properly interpret its provisions, CMS (now HCFA) issues interpretive guidelines.

1999: The OIG and CMS issue a special advisory bulletin giving guidance to hospitals regarding their obligations under EMTALA.

2002: Changes in regulations are proposed, May 9, 2002 (67 FR 31469-31479).

2003: CMS issued a final rule clarifying hospital responsibilities under EMTALA (68 FR 53221-53264).

Key Elements

EMTALA imposes three obligations on Medicare-participating hospitals whenever a patient comes to an emergency department, hospital outpatient department (clinics, primary care centers, diagnostic facilities and urgent care facilities) or is transported in an

[1] Note that the Omnibus Budget Reconciliation Act of 1989 deleted the word "active" from the title of EMTALA (GAO June 2001).

[2] An excellent overview of EMTALA is at ACEP (2000).

ambulance.[3] First, hospitals must provide a medical screening exam to determine whether an emergency medical condition exists. Second, the facility must provide treatment for patients with such conditions until they are stabilized without any delay from queries about ability-to-payment or insurance status. Third, if the hospital cannot stabilize the patient, it must provide appropriate transfer. Transfers without stabilization are not permitted unless:

- Transfer is appropriate (the transferring hospital must provide whatever care it can, minimize transfer risks and transfer only to a receiving facility that has agreed to the transfer and has the space and qualified personnel to handle it);
- The patient must make the transfer request in writing after being informed of the hospital's EMTALA obligations and any risks of transfer;
- A physician must certify the medical benefits of transfer exceed the risks.

EMTALA imposes obligations on all facilities such as maintaining records of patients transferred to and from the hospital and maintaining a list of on-call physicians. It also obligates hospitals with specialized facilities such as burn units or neonatal intensive care units to accept transfers if they have the capacity to treat them.

Scope

EMTALA covers all hospitals participating in Medicare, nearly 4,900 short-term general hospitals nationwide.

Enforcement

CMS regional offices have responsibility for investigating EMTALA-related complaints and forwarding confirmed violations to the Office of Inspector General (OIG). OIG it may levy civil monetary penalties subject to a 2-year statute of limitations, as follows:

- Hospitals are subject to termination of their Medicare provider agreements;
- Hospitals may be fined up to $25,000 (if fewer than 100 beds) or $50,000 per violation;
- Hospitals may be sued by patients for personal injury in civil court;
- A receiving facility that has suffered a financial loss as a result of a hospital's EMTALA violation may sue to recover damages;
- Physicians may be excluded from Medicare and Medicaid programs;
- Physicians may be fined up to $50,000.

Research Questions

This working paper covers two major topic areas framed within seven research questions, all of which are related to the impact of EMTALA in the U.S. Our primary goal was to identify, review, and evaluate the published literature to answer the research questions with the intent of developing an interim estimate of the costs and benefits of

[3] Hospitals must screen and stabilize patients in hospital-owned or operated ambulances. A recent ruling by the Ninth U.S. Circuit Court of Appeals now applies EMTALA to non-hospital-owned ambulances, stating further that hospitals cannot turn away ambulances once radio contact is made unless they lack appropriate staff, facilities or equipment for treatment (Arrington v. Wong 237 F. 3d 1066, 9th Cir. January 22, 2001).

EMTALA; our secondary goal was to identify areas where no evidence exists or where the evidence has important limitations and then describe the type of data that would be needed to more fully address the question.

The questions are listed below by topic area, along with a brief description of our analytical approach, including outcomes of interest.

Costs of EMTALA

Question 1a. *What is the amount of government regulatory costs related to EMTALA?* This includes federal costs to monitor and enforce EMTALA rules.

Question 1b. *What is the amount of industry compliance costs related to EMTALA?* This includes all administrative costs and enforcement penalties borne by private, state or locally owned health facilities subject to EMTALA.

Question 1c. *What is the resource cost of uncompensated care induced by EMTALA?* Theoretically, EMTALA may impose an added cost on a *particular* facility, but it is not clear how much added cost it imposes on the health care system overall given that those benefited by it often may have gotten care somewhere in the system in any case. To the extent that EMTALA serves as an unfunded mandate, any incremental costs can be viewed as a transfer cost, i.e., should have an offsetting benefit.

Question 1d. *What is the impact and associated cost of EMTALA on the number of uninsured?* Skeptics of EMTALA have argued that by mandating the availability of coverage, EMTALA has stimulated reductions in insurance coverage resulting from increased awareness that hospitals cannot turn away emergency patients (imposing a cost equal to the social cost of being uninsured for each individual so persuaded).

Question 1e. *What is the impact and associated cost of EMTALA on use of the ER for non-emergency medical care?* Some have argued that EMTALA has increased use of ER for non-emergency conditions (imposing a cost equal to the resource cost difference between an ER visit and physician office visit).

Question 1f. *What is the impact and associated cost of EMTALA on use of the ER for non-emergency medical care?* Some have argued that EMTALA has led to reductions in physician willingness to provide on-call services to ER's (imposing a cost equal to the consumer surplus related to any resultant reduction in services).

Benefits of EMTALA

Question 2a. *What is the value of uncompensated care induced by EMTALA?* EMTALA is intended to expand access to individuals who otherwise would lack access to emergency care, and in theory should reduce avoidable deaths and disabilities. Likewise, one might even postulate EMTALA as cost-reducing if on balance more speedily-delivered emergency care is less expensive than the avoidable downstream costs of delayed care.

Limitations of Working Paper

In requesting this research, DALTCP sought evidence from the medical and scientific literature to determine the magnitude of costs and benefits of EMTALA as part of a broader assessment of the impact of health services regulation. Seven specific questions were framed within two topic areas. The information compiled in this report may permit

policymakers to identify areas in which regulatory costs appear excessive relative to benefits. This working paper is *not* designed, however, to provide specific guidance on ways in which the objectives of EMTALA might be pursued more cost-effectively.

Section II. Methods

Literature Search and Review

Sources

Peer-Reviewed Literature

We performed electronic subject-based searches of the literature using the following databases:

- MEDLINE® (1975-June 30, 2004) and CINAHL® (1975-June 30, 2004) which together cover all the relevant clinical literature and leading health policy journals
- *Health Affairs*, the leading health policy journal, whose site permits full text searching of all issues from 1981-present
- ISI Web of Knowledge (1978-June 30, 2004) which includes the *Science Citation Expanded*®, *Social Sciences Citation Index*®, and *Arts & Humanities Citation Index*™ covering all major social sciences journals
- Lexis-Nexis (1975-June 30, 2004) which covers all major law publications
- Public Affairs Information Service (PAIS), including PAIS International and PAIS Periodicals/Publishers (1975-June 30, 2004) which together index information on politics, public policy, social policy, and the social sciences in general. Covers journals, books, government publications, and directories.
- Dissertation Abstracts (1975-June 30, 2004)
- Books in Print (1975-June 30, 2004)

A professional librarian assisted in the development of our search strategy, customizing the searches for each research question. In cases where we already had identified a previous literature synthesis that included items known to be of relevance, we developed a list of search terms based on the subject headings from these articles and from the official indexing terms of MEDLINE and other databases being used. We performed multiple searches with combinations of these terms and evaluated the results of those searches for sensitivity and specificity with respect to each topic. We also performed searches on authors known or found to have published widely on a study topic. In addition to performing electronic database searches, we consulted experts in the field for further references. Finally, we reviewed the references cited by each article that was ultimately included in the synthesis. We did not hand search any journals. This review was limited to the English-language research literature. A complete listing of search terms and results is found in Appendix A.

"Fugitive" Literature

In some cases, relevant "fugitive" literature was cited, in which case we made every effort to track it down. We also performed systematic Web searches at the following sites:

- Health law/regulation Web sites
- Health industry trade organizations
- State agency trade organizations and research centers

- Major health care/health policy consulting firms
- Health policy research organizations
- Academic health policy centers
- Major health policy foundations

These searches varied by site. In cases where a complete publications listing was readily available, it was hand-searched. In other cases, we relied on the search function within the site itself to identify documents of potential relevance. Because of the volume of literature obtained through the peer-reviewed literature, including literature syntheses, we avoided material that simply summarized existing studies. Instead, we focused on retrieval of documents in which a new cost estimate was developed based on collection of primary data (e.g., surveys of state agencies) or secondary analysis of existing data (e.g., compilation of agency enforcement costs available from some other source). We excluded studies that did not report sufficient methodological detail to permit replication of their approach to cost estimation.

Inclusion Criteria

We developed the following inclusion criteria:

- Sample: wherever results from nationally representative samples were available, these were used in favor of case studies or more limited samples.
- Multiple Publications: whenever multiple results were reported from the same database or study, we selected those that were most recent and/or most methodologically sound.
- Outcomes: we selected only studies in which a measurable impact on costs was either directly reported or could be estimated from the reported outcomes in a reasonably straightforward fashion.
- Methods: we only selected studies in which sufficient methodological detail was reported to assess the quality of the estimate provided.

Where possible, we limited the review to studies using from 1975 through June 30, 2004 reasoning that any earlier estimates could not be credibly extrapolated to the present given the sizable changes in the health care industry during the past two decades. Other exclusions were as follows:

- Unless we had no other information for a particular category of costs or benefits, we excluded qualitative estimates of impact.
- Estimates of impacts derived from unadjusted comparisons were discarded whenever high quality multivariate results were available to control for differences between states or across time.
- Estimates that focused on measuring system-wide impact generally were selected over narrower estimates (e.g., per capita health spending vs. cost per inpatient day) on grounds that savings achieved in one sector may have induced higher spending elsewhere in the system; hence narrower comparisons might inadvertently lead to an inappropriate conclusion.

Section III. Results

Empirical Evidence

Few of these theoretical cost impacts have been expressly measured.

- *Government Regulatory Costs*. A recent GAO study found that from 1995-2000, on average, CMS investigated 400 hospitals annually, cited about half of them for EMTALA violations (GAO June 2001), but no cost figures for EMTALA enforcement were located.
- *Industry Compliance Costs: Administrative Costs.* We found no literature that summarized or estimated health industry compliance costs.
- *Industry Compliance Costs: Enforcement Penalties*. Of the cases referred by CMS for violations in 1995-2000, OIG imposed fines totaling $5.6 million on 194 hospitals and 19 physicians over the entire period; only 4 hospitals' Medicare provider agreements have been terminated due to EMTALA and these all occurred more than 15 years ago (GAO June 2001).
- *Industry Compliance Costs: EMTALA-Related Hospital Uncompensated Care*. Although use of ER's for non-emergency care is well documented (Billings et al. 2000; Baker et al. 1994; Grumbach et al. 1993; GAO January 1993), we found no studies that have formally estimated EMTALA's contribution. A recent study documenting the growing problem of ER diversions reported that "in Phoenix, many downtown hospitals attributed increased provision of ER services primarily to greater focus on EMTALA compliance (Brewster, Rudell and Lesser 2001: 2), while another assessment of rising ER use concludes that in light of so many other contributing factors (e.g., growing uninsured), determining EMTALA's share is difficult (GAO June 2001). EMTALA regulations were not issued until 1994 (42 CFR Sec. 489.20 and Sec. 489.24), but between 1994-2000, ER visits grew only 5 percent—the same as population growth—no "excess" growth can be attributed to EMTALA.
- *Industry Compliance Costs: EMTALA-Related Physician Uncompensated Care*. The American Medical Association estimated that in 2001, all physicians incur an average level of bad debt attributable to EMTALA equal to $4.2 billion, or $12,300 per physician (Kane 2003). Bad debts included only services for which payment was expected but not made (i.e., charity care and deductions from revenue due to Medicaid/Medicare were excluded)..
- *Indirect Costs: Increased Number of Uninsured*. Epstein (1997) suggests EMTALA contributes to higher uninsured rates, but provides no empirical evidence regarding the magnitude of this effect. However, in other work, Rask and Rask (2000) have shown that the presence of hospital uncompensated care pools increases the fraction of the population that is uninsured by 20.4 percent among the poor, by 36.6 percent among those with low incomes and by 28.4 percent among middle income families.
- *Indirect Costs: External Costs of Being Uninsured.* Hadley and Holahan (2003) have estimated that the typical uninsured person generates $1,587 in annual health spending each year, of which slightly more than one third ($554) is uncompensated

care provided by hospitals, physicians or publicly-financed clinics and direct care programs.

- *Indirect Costs: Mortality Losses*. Using evidence from studies showing that being uninsured elevates mortality risk by 25 percent, the Institute of Medicine (2002) has calculated there were 18,314 excess deaths in 2000 attributable to lack of health insurance coverage.
- *Efficiency Losses from Tax Collection*. To account for the efficiency losses associated with raising taxes to pay for public administration, we multiply the latter times the marginal cost of income tax collections. This figure, 52.5% (30.9%, 184.5%), accounts for the costs of tax administration, tax compliance costs and efficiency losses (deadweight burden) associated with federal income taxes (see Table B-1 for how these costs are calculated).
- *Efficiency Losses from Regulatory Costs.* All industry compliance costs, including additional uncompensated care induced by pools are presumed to be roughly equivalent to an excise tax, i.e., raising prices and reducing demand/output correspondingly. We therefore multiply these costs times the marginal excess burden associated with income taxes, using 40% (23.0%, 162.9%) as the expected value of MEB (See Table B-1 for details of how MEB is calculated).

Likewise, hard empirical evidence regarding EMTALA's benefits is sparse:

- A GAO study found the hospital and physician representatives thought that EMTALA had been beneficial in ensuring access and reduce patient dumping, but because there are no data on the incidence of patient dumping prior to EMTALA, the overall impact is difficult to measure (GAO 2001).
- An OIG survey of ER directors showed that 44 percent thought EMTALA had improved quality of care, chiefly through its patient protections, but 41 percent thought patient care was unaffected since they already had provided screening and stabilization services prior to its enactment (OIG 2001).

Net Assessment

In light of the available estimates, we have calculated the regulatory costs of EMTALA in the following fashion (minimum and maximum parameter estimates are shown in parentheses: full details of methods and sources are in Table C-1):

- *Government Regulatory Costs.* Absent hard DHHS annual budget allotments for EMTALA enforcement costs, we approximated by assuming $27,500 ($5,000, $50,000) per investigation, multiplying by the average number of investigations completed annually; we subtracted enforcement penalties from this total since this represents a shifting of costs from taxpayers to the health industry.
- *Industry Compliance Costs: Administrative Costs.* Absent hard information regarding hospital administrative costs in response to EMTALA compliance investigations, we assumed the ratio of hospital compliance costs to federal administrative costs to be 1:1.
- *Industry Compliance Costs: Enforcement Penalties*. We used the average annual amount of fines from 1995-2000 without further adjustment for inflation (note

above these were subtracted from Public Administration costs to avoid double-counting).

- *Industry Compliance Costs: EMTALA-Related Hospital Uncompensated Care*. Absent hard information, we estimated the ER share of total hospital uncompensated care was 13.7% (6.8%, 20.5%) and that the portion of this "induced" by EMTALA might be 6% (2%, 10%). This cost is a transfer to patients, so we include it both as a cost and benefit. But because it is free care, patients do not value it at its cost, so we adjust the figure downward using RAND Health Insurance Experiment estimates of the amount of "waste" involved in providing patients with free care as the basis for this adjustment.
- *Industry Compliance Costs: EMTALA-Related Physician Uncompensated Care*. We used the $4.2 billion figure reported by the AMA as our maximum on grounds that at least some of this would have been incurred regardless of EMTALA; the minimum was assumed to be 25% of this, with the expected value in between. Note that the Medicare fee schedule for emergency medicine physicians is adjusted upward assuming that 55 percent of their time treating patients is uncompensated (see 67 F.R. 251: 79972 for discussion); thus at least a portion of this "uncompensated" care actually is borne by the public sector. Nevertheless, regardless of how it is financed, such care is a legitimate EMTALA-related cost, so we include it here. We use the previously-noted method to waste-adjust estimated benefits.
- *Indirect Costs: External Costs of Being Uninsured.* We roughly calculate the estimated increase in uninsured by assuming that EMTALA has an effect that is at least 1% as large as the effect proposed by Rask and Rask (2000), but no greater than 10% (averaging these extremes as an expected value). The estimated increase in the number uninsured is multiplied by the external cost of being uninsured. Note that while being uninsured is associated with higher rates of avoidable hospital use (IOM, 2002), the added costs associated with such care are already accounted for in the foregoing calculation. On the benefits side, we adjust this figure downward to account for waste.
- *Indirect Costs: Mortality Losses*. We calculate the expected increase in uninsured deaths by multiplying the added number of uninsured times the excess mortality ratio. These are then multiplied by the estimated willingness-to-pay value of an uninsured life using an expected value of $2.9 million ($1.1, $4.4); details are in Table F-2. This is based on the estimated willingness-to-pay to avoid mortality risk among the uninsured, taking into account their somewhat younger age and their lower average income.
- *Social Welfare Losses: Efficiency Losses from Tax Collection*. To account for the efficiency losses associated with raising taxes to pay for government regulatory costs, we multiply the latter times the marginal cost of income tax collections (see Table B-1 for how these costs are calculated).
- *Social Welfare Losses: Efficiency Losses from Regulatory Costs.* All industry compliance costs, including additional uncompensated care induced by pools are presumed to be roughly equivalent to an excise tax, i.e., raising prices and reducing demand/output correspondingly. We therefore multiply these costs times the

marginal excess burden associated with output taxes, using 21% (15%, 28%) as the expected value of MEB (see Table B-1 for details of how MEB is calculated).

All told, EMTALA results in expected costs of $4.4 billion ($1.3, $11.0) and expected benefits of $2.1 billion ($0.4, $4.9).

Acronyms

CMS	Centers for Medicare and Medicaid Services
HHS	Department of Health and Human Services
OIG	Office of Inspector General, HHS
RBRVS	Resource-Based Relative Value Scale (Medicare fee schedule)
HCFA	Health Care Financing Administration

Listing of Included Studies

1. Ai, Julia. "Does EMTALA Apply to Inpatients Located Anywhere in a Hospital?" Camden Rutgers Law Journal 32 (Winter 2001): 549.

2. American College of Emergency Physicians. "EMTALA Fact Sheet." [http://www.acep.org/1,393,0.html]. 4 January 2003.

3. _____, "Resolution 34(02): Funding for EMTALA-Mandated Physician Services." (2002):2002.

4. Asplin, B. R. "Controversial Company: the Prudent Layperson Standard and the Patients' Bill of Rights." Annals of Emergency Medicine 35, no. 3 (March 2000): 304-7.

5. Baker, Lawrence C. and Linda Schuurman Baker. "Excess Cost of Emergency Department Visits for Nonurgent Care." Health Affairs 13, no. 5 (Winter 1994): 162-71.

6. Bardot, Heather K. "COBRA Strikes at Virginia's Cap on Malpractice Actions: an Analysis of Power V. Arlington Hospital." Geo. Mason Ind Law Review 2(Winter 1993).

7. Billings, John. et al. Emergency Room Use: The New York Story. 2000.

8. Bonanno, Mark A. "The Case of Baby K: Exploring the Concept of Medical Futility." Annals of Health Law 4(1995): 151.

9. Bourgeois, F. T. and M. W. Shannon. "Adult Patient Visits to Children's Hospital Emergency Departments." Pediatrics 111, no. 6 (June 2003): 1268-72.

10. Brewster, Linda R., Liza S. Rudell, and Cara S. Lesser. 2001. Issue Brief No. 38.

11. Centers for Medicare, &. Medicaid Services (CMS), HHS. "Medicare Program; Clarifying Policies Related to the Responsibilities of Medicare-Participating Hospitals in Treating Individuals With Emergency Medical Conditions. Final Rule." Federal Register 68, no. 174 (September 2003): 53222-64.

12. Christakis, Anna Katrina S. "Emergency Room Gatekeeping: a New Twist on Patient Dumping." Wisconsin-Law-Review. 1997:295-320, No 2 1997 (1997).

13. Creswell, C. Celeste. "Power V. Arlington Hospital Association: Extending COBRA's Striking Distance While Weakening the Power of Its Venom." Ga. Law Review 29(Summer 1995).

14. Dame, Lauren A. "The Emergency Medical Treatment and Active Labor Act: the Anomalous Right to Health Care." Health Matrix 8(Winter 1998).

15. DeFeo, L. "EMTALA Impact on Emergency Physicians." Maryland Medicine 4, no. 1 (Winter 2003): 7-8.

16. Derlet, R and D Nishio. "Refusing Care to Patients Who Present to an Emergency Department." Annals of Emergency Medicine 19(1990): 262-67.

17. DHHS U.S. Department of Health and Human Services, Office of Inspector General. Washington, DC: Department of Health and Human Services, 2001. OEI-09-98-002200.

18. Engdahl, David E. "The Spending Power." Duke Law Journal 44(October 1994).

19. Epstein, Richard A. "Living Dangerously: a Defense of Mortal Peril." University of Ill. Law Review (1998): 909.

20. _____. "Mortal Peril: Our Inalienable Right to Health Care?". Cambridge, MA: Addison Wesley, 1997.

21. Fields, W. W. and others. "The Emergency Medical Treatment and Labor Act As a Federal Health Care Safety Net Program." Academic Emergency Medicine 8, no. 11 (November 2001): 1064-69.

22. Frank, Michael J. "Tailoring EMTALA to Better Protect the Indigent: the Supreme Court Precludes One Method of Salvaging a Statute Gone Awry." DePaul Health Care Law 3(Winter 2003).

23. Furrow, B. R. "An Overview and Analysis of the Impact of the Emergency Medical Treatment and Active Labor Act. [Review] [157 Refs] ." Journal of Legal Medicine 16, no. 3 (September 1995): 325-55.

24. GAO: U.S. Congress, General Accounting Office. Washington, DC: U.S. General Accounting Office, 2001. GAO-01-747.

25. _____. Washington, DC: United Sates General Accounting Office, 1993. GAO/T-HRD-94-55.

26. Gionis, Thomas A., Carlos A. Camargo Jr., and Anthony S. Zito Jr. "The Intentional Tort of Patient Dumping: a New State Cause of Action to Address the Shortcomings of the Federal Emergency Medical Treatment and Active Labor Act (EMTALA)." American University Law Review 52(October 2002): 173.

27. Grumbach, Kevin et al. "Primary Care and Public Emergency Department Overcrowding." Journal of Public Health 83, no. 3(1993).

28. Hadley, Jack. and John. Holahan. "How Much Medical Care Do the Uninsured Use, and Who Pays for It?" Health Affairs 22, no. 2 (February 2003): W3-66-W3-81.

29. Harden, Joseph N. "The "Gift" of Life: Should Anencephalic Infants Die to Serve Noble Goals?" Cumberland Law Review 27(1996): 1279.

30. Hyman, D. A. "Patient Dumping and EMTALA: Past Imperfect/Future Shock." Health Matrix 8, no. 1 (Winter 1998): 29-56.

31. Hyman, David A. "Lies, Damned Lies, and Narrative." Indiana Law Journal 73(Summer 1998): 797.

32. IOM Institute of Medicine. " Care Without Coverage: Too Little, Too Late. Washington, DC: National Academy Press, 2002.

33. _____. " Coverage Matters: Insurance and Health Care. Washington, DC: National Academy Press, 2001.

34. Jain, S. C. and S. Hoyt. "Patient Dumping in the Federal Courts: Expanding EMTALA Without Preempting State Malpractice Law." Law, Medicine & Health Care 20, no. 3 (Fall 1992): 249-52.

35. Kamoie, B. "EMTALA: Dedicating an Emergency Department Near You." Journal of Health Law 37, no. 1 (Winter 2004): 41-60.

36. Kane, Carol K. AMA: Chicago, 2003.

37. Lee, Tiana Mayere. "An EMTALA Primer: The Impact of Changes in the Emergency Medicine Landscape on EMTALA Compliance and Enforcement." Annals of Health Law 13(Winter 2004): 145.

38. Lipton, M. Steven. "Summary of Final Changes to EMTALA Regulations." Davis Wright Tremaine LLP Health Law Group Advisory Bulletin (September 2003): 7.

39. McHugh, E. M. "The New EMTALA Regulations and the on-Call Physician Shortage: in Defense of the Regulations." Journal of Health Law 37, no. 1 (Winter 2004): 61-84.

40. McKitrick, Amy J. "The Effect of State Medical Malpractice Caps on Damages Awarded Under the Emergency Medical Treatment and Active Labor Act (42 U.S.C. § 1395dd)." Clev. State Law Review 42(1994): 171.

41. Mulligan, Edward John. "Restrictive Liability Under the Emergency Medical Treatment Act?" Maine State Bar Association Maine Bar Journal 13 (March 1998): 74.

42. Olson, E. J. "No Room at the Inn - a Snapshot of an American Emergency Room." Stanford Law Review 46, no. 2 (January 1994): 449-501.

43. Origitano, T. C. "Emtala, Malpractice, 80-Hour Work Week, and Specialty Hospitals: Socioeconomic Factors Affecting Access to Care and the Quality of Neurosurgery Training." Journal of Neurosurgery 100, no. 4 (April 2004): 789.

44. Overby, Benjamin D. "North Carolina Hospitals' Dilemma: the Inherent Conflict Between Carolina Access and the Emergency Medical Treatment and Active Labor Act." Campbell Law Review 20(Winter 1997): 135.

45. Perkins, J. and Y. Vera. "Legal Protections

to Ensure Linguistically Appropriate Health Care." Journal of Health Care for the Poor and Underserved 9 (1998): S62-S80.

46. Quinn, D. K. , C. M. Geppert, and W. A. Maggiore. "The Emergency Medical Treatment and Active Labor Act of 1985 and the Practice of Psychiatry." Psychiatric Services 53, no. 10 (October 2002): 1301-7.

47. Ramage, Wayne Edward. "The Pariah Patient: the Lack of Funding for Mental Health Care." Vanderbilt Law Review 45 (May 1992): 951.

48. Rask, KN and KJ Rask. "Public Insurance Substituting for Private Insurance: New Evidence Regarding Public Hospitals, Uncompensated Care Funds, and Medicaid." Journal of Health Economics 19, no. 1 (January 2000): 1-31.

49. Rich, Robert F. "Borrowing Policy: Health Policy, Health Insurance and the Social Contract." Comparative Labor Law & Policy Journal 21 (Winter 2000): 397.

50. Richardson, Lynne D. and Ula Hwang. "Special Issue: The Unraveling Safety Net - Access to Care." Academic Emergency Medicine 8, no. 11(2001): 1030-1036.

51. Rosenbaum S. "The Impact of United States Law on Medicine As a Profession." JAMA 289, no. 12 (March 2003): 1546-56.

52. Rosenbaum, S. and B. Kamoie. " Finding a Way Through the Hospital Door: the Role of Emtala in Public Health Emergencies." Journal of Law Medicine & Ethics 31, no. 4 (Winter 2003): 590-+.

53. Scaduto, L. H. "The Emergency Medical Treatment and Active Labor Act Gone Astray: a Proposal to Reclaim Emtala for Its Intended Beneficiaries." Ucla Law Review 46, no. 3 (February 1999): 943-82.

54. Scheer, Nathanael J. "Keeping the Promise: Financing EMTALA's Guarantee of Emergency Medical Care for Undocumented Aliens in Arizona." Arizona State Law Journal 35(Winter 2003): 1413.

55. Sheils, John F., Lawrence S. Lewin, and Randall A. Haught. "Potential Public Expenditures Under Managed Competition." Health Affairs Supplement (1993): 229-42.

56. Singer, Lawrence E. "Look What They'Ve Done to My Law, Ma: COBRA's Implosion." Hous. Law Review 33(1996).

57. Stieber, Joan M. and Linda J. Spar. "EMTALA in the 90's -Enforcement Challenges." Health Matrix 8(Winter 1998).

58. Surabian, Stanley R. "EMTALA: Impact on Hospital Dentistry Emergency Services." Special Care in Dentistry 20, no. 1 (January 2000-February 2000): 7-11.

59. Ulen, Thomas S. "Is America's Health Care System in Mortal Peril? An Introduction to Mortal Peril." University of Ill. Law Review (1998).

60. Uzych, L. "Patient Dumping. [Review] [12 Refs]." Journal of the Florida Medical Association 77, no. 2 (February 1990): 97-100.

61. Velianoff, G. D. "Overcrowding and Diversion in the Emergency Department - the Health Care Safety Net Unravels." Nursing Clinics of North America 37, no. 1 (March 2002): 59-+.

62. Weiss, Larry D. "Fixing EMTALA: What's Wrong With the Patient Transfer Act." Journal of Public Health Policy 20, no. 3 (September 1999): 335-47.

63. Young, Christopher J. "Emergency! Says Who?: Analysis of the Legal Issues Concerning Managed Care and Emergency Medical Services." The Catholic University of America Journal of Contemporary Health Law & Policy 13 (Spring 1997): 553.

64. Zibulewsky, J. "Medical Staff Knowledge of EMTALA at a Large, Tertiary-Care Hospital." American Journal of Emergency Medicine 21, no. 1 (January 2003): 8-13.

Listing of Excluded Studies

Key for Reasons for Exclusion

1. Studies with no original data
2. Studies with no outcomes of interest
3. Studies performed outside U.S.
4. Studies published in abstract form only
5. Case-report only
6. Unable to obtain the article

1. Jain, S. C. and S. Hoyt. "Patient Dumping in the Federal Courts: Expanding EMTALA Without Preempting State Malpractice Law." Law, Medicine & Health Care 20, no. 3 (Fall 1992): 249-52.

2. Rosenbaum, Sara and Brian Kamoie. "National Challenges in Population Health: Finding a Way Through the Hospital Door: the Role of EMTALA in Public Health Emergencies." American Society of Law, Medicine & Ethics Journal of Law, Medicine & Ethics 31 (Winter 2003): 590.

Appendix A. Evidence Tables

Table F-1.1 Costs and Benefits of EMTALA (millions of 2004 dollars)

	Costs			Benefits			
Cost Category	**Expected**	**Minimum**	**Maximum**	**Expected**	**Maximum**	**Minimum**	**Notes**
Government Regulatory Costs	**0.55**	**0.28**	**1.10**	**-**	**-**	**-**	
Federal	-	-	-	-	-	-	
State	0.55	0.28	1.10	-	-	-	[A]
Industry Compliance Costs	**763.7**	**-**	**1,566.8**	**528.4**	**-**	**1,084.0**	
Administration costs	**-**	**-**	**-**	**-**	**-**	**-**	
Pool-related uncompensated hospital care	763.7	-	1,566.8	528.4	**-**	1,084.0	[B]
Indirect Costs	**6,914.2**	**598.3**	**-**	**1,570.8**	**229.6**	**-**	
External costs of higher number of uninsured	2,270.5	598.3	-	1,570.8	229.6	-	[C]
Health Losses	4,643.8	-	-	**-**	**-**	**-**	
Morbidity losses	**-**	**-**	**-**	**-**	**-**	**-**	
Mortality losses	4,643.8	-	-	**-**	**-**	**-**	[D]
Social Welfare Losses	**635.2**	**88.0**	**439.2**	**-**	**-**	**-**	**-**
Efficiency losses from tax collection	0.3	0.1	2.0	**-**	**-**	**-**	[E]
Efficiency losses from regulatory costs	634.9	87.9	437.1	-	-	-	[F]
GRAND TOTAL	**8,313.7**	**686.6**	**2,007.1**	**2,099.2**	**229.6**	**1,084.0**	

Notes:

[A] Regulatory costs were assumed to be at least $50,000 each [P28] in the 11 states with pools.

[B] Compliance expenditures are equal to cost of uncompensated care in states with pools [P4] times the estimated share attributable to pools. This share is calculated as (1 - 1/(1+[P1])) where [P1] equals the estimated percent increase in uncompensated care in states with pools. These expenditures represent a transfer of free services to patients; however, the value of these services to the recipient patients is unlikely to match the cost of providing them; therefore this value is estimated from figures from the RAND Health Insurance Experiment. Benefits are calculated as cost x (1 minus waste as a percent of free care [P27]).

[C] Transfer costs are calculated in two steps: the additional number of uninsured persons attributable to the uncompensated care pools is calculated for each level of poverty, taking into account the estimated number of uninsured in each group (adjusted downward to reflect Medicaid undercounting) and the estimated increase in uninsured risk that results from the existence of uncompensated care pools, i.e., (poor=[P7]*[P10]*[P13]); low-income=[P8]*[P11]*[P14]); middle-income=[P9]*[P12]*[P15]). These values are summed and multiplied by the share of the total population that lives in the eleven states with uncompensated care pools [P16].. This estimated increase in uninsured persons is then multiplied the average external (subsidized) cost of being uninsured [P17] that is not associated with EMTALA ([P17]*[P18]*(1-[P5]*[P6])) since EMTALA costs are calculated separately in a different paper.

[D] Increases in mortality are measured as follows: the excess deaths per million uninsured [P23] is multiplied by the WTP value of life [P24] to yield the cost of lost lives. This is then multiplied by the product of the number of uninsured due to the uncompensated care pools for each level of poverty considered (poor=[P7]*[P13], low income=[P8]*[P14], and middle-income=[P9]*[P15]) and the share of ER visits not attributable to EMTALA, 1-[P5]*[P6]. This monetized value of mortality is then adjusted for the eleven states that the data represents [P16].

[E] Figure shown equals government administrative costs times tax overhead costs [P25].

[F] All losses borne by health industry are presumed to be roughly equivalent to excise taxes, I.e., raising prices and reducing demand/output. The marginal excess burden (MEB) is intended to measure the deadweight loss associated with such reduced output. Therefore, the figure shown is calculated by summing all health industry losses and multiplying times MEB [P26].

Parameters:		Expected	Minimum		Maximum		Notes
[P1]	Assumed pool impact on uncompensated care total	7.8%	0.0%		15.6%		[a]
[P2]	Uncompensated care as percent of hospital spending						[b]
	CT	4.0%	3.6%		4.4%		
	FL	6.5%	5.9%		7.2%		[c]
	IN	5.1%	4.6%		5.6%		
	ME	5.0%	4.5%		5.5%		
	MA	5.3%	4.8%		5.8%		
	NJ	6.7%	6.0%		7.4%		
	NY	5.6%	5.0%		6.2%		
	OH	5.2%	4.7%		5.7%		
	RI	3.9%	3.5%		4.3%		
	SC	6.3%	5.7%		6.9%		
	VA	7.0%	6.3%		7.7%		
[P3]	Hospital spending, 2004 (millions)						[d]
	CT	6,771	6,771		6,771		
	FL	31,509	31,509		31,509		
	IN	12,524	12,524		12,524		
	ME	2,864	2,864		2,864		
	MA	18,090	18,090		18,090		
	NJ	16,282	16,282		16,282		
	NY	46,334	46,334		46,334		
	OH	24,622	24,622		24,622		
	RI	2,613	2,613		2,613		
	SC	8,215	8,215		8,215		
	VA	13,001	13,001		13,001		
[P4]	Gross uncompensated care total, 2004 (millions)	10,555	9,500		11,611		[e]
[P5]	ER share of total uncompensated care	12.5%	5.0%		20%		[f]
[P6]	EMTALA share of ER total	6.0%	2.0%		10%		[g]
	Percent increase in uninsured rate due to uncompensated care pools						
[P7]	Poor <100%	38.9%	1.9%	#	38.9%		[h]
[P8]	Low income 100-200%	43.1%	30.1%	#	43.1%		[h]
[P9]	Middle income 200-400%	37.9%	18.9%	#	37.9%		[h]
	Ratio of actual uninsured to counted uninsured in CPS						
[P10]	Poor <100%	74.4%	63.0%		74.4%		[i]
[P11]	Low income 100-200%	91.3%	63.0%		91.3%		[i]
[P12]	Middle income 200-299%	96.3%	90.0%		96.3%		[i]
	Nonelderly uninsured total, March 2004 (millions)						
[P13]	Poor <100%	11.5	11.3		11.7		[j]
[P14]	Low income 100-200%	12.9	12.6		13.2		[j]
[P15]	Middle income 200-299%	8.7	8.5		8.9		[j]
[P16]	Share of population living in 11 states with pools	29.7%	29.7%		30%		[k]
[P17]	Average external cost of being uninsured, 2004	$ 665	$ 358		$ 955		[l]
	Excess mortality related to lack of coverage						
[P23]	Excess deaths per million uninsured	444	-		551		[p]
[P24]	WTP value of life (millions)	3.1	1.1		4.4		[q]
[P25]	Marginal tax overhead costs	52%	31%		185%		[r]
[P26]	Marginal excess burden	21%	15%		28%		[s]
[P27]	Waste as a percent of free care	31%	62%		15%		[t]
[P28]	Costs to states with pools of regulatory costs	50,000	25,000		100,000		[u]

Parameter Notes:

[a] The maximum bound is determined from [S1]. These figures are adjusted figures from [S5] in Table B-12 and are based on figures in [S8] p. 12.

[b] Uncompensated care as percent of hospital spending numbers are reported in [S5]; upper and lower bounds calculated as+/- 10% of these reported figures.

[c] Data from Georgia [S5] were used as a proxy for missing data on Florida.

[d] Data for 2004 reported in [S1A].

[e] Calculated by multiplying each state's uncompensated share [P2] times hospital spending [P3] and summing results.

[f] Absent hard data, we estimated the ER share of total hospital uncompensated care as 12.5% as the expected value with upper and lower bounds of 20% and 5% respectively.

[g] Absent hard data, we estimated the portion of ER-related hospital uncompensated care induced by EMTALA was at least 2% but no greater than 10%, with the midpoint as the expected value.

[h] All figures are calculated from results reported in Table 6 of [S6] by dividing the estimated percentage point change in uninsured rate in states with and without uncompensated care funds by the baseline uninsured rate for individuals in each poverty category in states without such funds. Reported results include estimates for 1989 and 1992, so the lowest reported value was used as minimum figure regardless of which year of data was used to estimate it. Expected value is the midpoint of the values shown.

[i] All figures are based on March 2004 Current Population Survey tabulations reported in Table 6 of [S1C]. Minimum and maximum values are approximated by authors from 90% confidence interval reported for the uninsured rate for the lowest category of family income (<$25,000), i.e., +/-0.5/24.2 as reported by U.S. Census Bureau [S1B: 15], since this category roughly approximates in size each of the poverty groups shown.

[j] Ratios are calculated based on the estimated number of uninsured after adjusting for Medicaid undercounting. Lower bound figures are based on estimates reported for those below 200% of poverty and above this threshold [S2A: 12]. Upper bound figures calculated by author based on figures reported for below 100% FPL, 100<200% and 200<300% [S2B]. The midpoint of these estimates is the expected value.

[k] Population estimates derived from the census bureau data and extrapolated from 2001 to 2002 using equal growth trends from 2000-2001.

[l] All figures calculated from figures on per capita uninsured estimates of total uncompensated care reported in [S1D]. Minimum figure is for part-year uninsured; maximum is for full-year uninsured; expected is for all uninsured.

[p] Figures calculated from Medical Expenditure Panel Survey data and reported in [S2]. Minimum figure is for part-year uninsured; maximum is for full-year uninsured; expected is for all uninsured.

[q] The expected value of a life is estimated based on a review of various estimates and meta-analyses reported in [S3].

[r] Marginal cost of tax collections is the sum of administrative, compliance and marginal excess burden (deadweight loss): it represents the total amount of resources lost to society per dollar of revenue collected.

[s] Marginal excess burden is the efficiency loss associated with a small increase in income taxes. It represents the share of the revenues collected that are lost due to reduced output as measured by general equilibrium models. The figures shown are weighted averages for personal and corporate income taxes using the best available estimates from the literature for each.

[t] Expected value is the estimated percent of care provided in the free care plan that represented waste (i.e., estimated value of care minus its cost) in the RAND Health Insurance Experiment [S4]. Minimum value is assumed to be double this amount and maximum value is assumed to be half this value (a higher value is used for the minimum since this minimizes the estimated value of uncompensated care provided through EMTALA, thereby making the Benefits lower).

[u] Assumed.

Sources:

[S1] Gaskin, Darrell J. 1997 Altruism or Moral Hazard: the Impact of HMO Penetration on the Rate of Hospital Cost Inflation, 1985-1993. *Inquiry* 34, no. 2: 205-16.

[S1A] Centers for Medicare and Medicaid Services. Health expenditures by state of provider: Summary Tables, 1980-2004 (Preliminary, May 2006). Available at http://www.cms.hhs.gov/NationalHealthExpendData/downloads/nhestatesummary2004.pdf (accessed June 3, 2006).

[S1B] DeNavas-Walt, Carmen, Bernadette D. Proctor, Robert J. Mills, Income, Poverty, and Health Insurance Coverage in the United States: 2003. Washington, DC: U.S. Census Bureau P60-226, August 2004. Available at http://www.census.gov/prod/2004pubs/p60-226.pdf (accessed June 3, 2006).

[S1C] Economic Research Initiative on the Uninsured. Table 6 - CPS. Race/Ethnicity and Income (Poverty Level)
Non Elderly Population: Calendar Year 2004. Available at http://www.umich.edu/~eriu/fastfacts/cps2004_6.html (accessed June 3, 2006).

[S1D] Hadley, Jack and John Holahan. 2004. The Cost of Care for the Uninsured: What Do We Spend, Who Pays, and What Would Full Coverage Add to Medical Spending? Issue Update 2004 Prepared for Kaiser Commission on Medicaid and the Uninsured, May 10, 2004. Available at: http://www.kff.org/uninsured/loader.cfm?url=/commonspot/security/getfile.cfm&PageID=35965 (accessed June 3, 2006).

[S2] Heffler, Stephen, Sheila Smith, Sean Keehan, M. Kent Clemesn, Greg Won, and Mark Zezza. 2003. Health Spending Projections for 2002-20012. *Health Affairs Web Exclusive* W 3: 54-65.

[S3] Johansson, Per-Olov. 2003. The value of a statistical life: theoretical and empirical evidence. Applied Health Economics and Health Policy, Special Issue: 25-33.

[S4] Keeler, Emmett B., et. al. 1988. The Demand for Episodes of Medical Treatment in the Health Insurance Experiment, R-3454-HHS. Santa Monica, CA: RAND Corporation.

[S5] Medicare Payment Advisory Commission (MedPAC). 2002. Report to the Congress: Medicare Payment Policy , Medicare Payment Advisory Commission, Washington, DC.

[S6] Rask, KN, and KJ Rask. 2000. Public insurance substituting for private insurance: new evidence regarding public hospitlas, uncompensated care funds, and medicaid. *Journal of Health Economics* 19, no. 1: 1-31.

[S7] Sheils, John F., Lawrence S. Lewin, and Randall A. Haught. 1993. Potential Public Expenditures Under Managed Competition. *Health Affairs* Supplement: 229-42.

[S8] United States General Accounting Office . 2001. Emergency care: EMTALA implementation and enforcement issues, GAO-01-747. U.S. General Accounting Office, Washington, DC.

Appendix B. Search Strategies

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>
Search Strategy #1ab: Costs
---
1 EMTALA.mp. (138)
2 Patient Transfer/ (2775)
3 (prohibition or limit or regulation).mp. [mp=ti
tle, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (17)
5 "emergency medical treatment and active labor act".mp. (33)
6 1 or 4 or 5 (164)
7 (costs or burden or impact).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (205964)
8 6 and 7 (14)
9 limit 8 to (english language and yr=1975 - 2004) (14)
10 from 9 keep 1-4,6-14 (13)

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>
Search Strategy #1c: Uncompensated Care
---
1 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
2 patient transfer.mp. or Transfer, Discharge/ (2939)
3 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (21)
5 1 or 4 (157)
6 Uncompensated Care/ (614)
7 Medical Indigency/ (3286)
8 6 or 7 (3851)
9 5 and 8 (3)
10 from 9 keep 1-3 (3)

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>
Search Strategy #1d: Uninsured
---
1 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
2 patient transfer.mp. or Transfer, Discharge/ (2939)
3 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (21)
5 1 or 4 (157)
6 Medically Uninsured/ (2746)
7 5 and 6 (5)
8 limit 7 to (english language and yr=1975 - 2004) (5)
9 from 8 keep 1-5 (5)

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>
Search Strategy #1e: Non-emergency
---
1 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
2 patient transfer.mp. or Transfer, Discharge/ (2939)
3 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (21)

5 1 or 4 (157)
6 emergency service, hospital/ or emergency medical services/ or emergency services, psychiatric/ or "transportation of patients"/ or ambulances/ (43420)
7 health services misuse/ or unnecessary procedures/ (3527)
8 UNNECESSARY PROCEDURES/ or unnecessary.mp. (17140)
9 "non-emergency use".mp. (199)
10 7 or 8 or 9 (19716)
11 6 and 10 (718)
12 social control, formal/ or government regulation/ or law enforcement/ (15645)
13 2 and 12 (30)
14 1 or 13 (165)
15 dumping.mp. (1678)
16 2 or 15 (4453)
17 3 and 16 (45)
18 1 or 17 (181)
19 avoidable.mp. (2429)
20 10 and 19 (94)
21 10 or 19 (22051)
22 6 and 21 (762)
23 18 and 22 (0)

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>
Search Strategy #1f: On-Call
---
1 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
2 patient transfer.mp. or Transfer, Discharge/ (2939)
3 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (21)
5 1 or 4 (157)
6 emergency service, hospital/ or emergency medical services/ or emergency services, psychiatric/ or "transportation of patients"/ or ambulances/ (43420)
7 health services misuse/ or unnecessary procedures/ (3527)
8 UNNECESSARY PROCEDURES/ or unnecessary.mp. (17140)
9 "non-emergency use".mp. (199)
10 7 or 8 or 9 (19716)
11 6 and 10 (718)
12 social control, formal/ or government regulation/ or law enforcement/ (15645)
13 2 and 12 (30)
14 1 or 13 (165)
15 dumping.mp. (1678)
16 2 or 15 (4453)
17 3 and 16 (45)
18 1 or 17 (181)
19 avoidable.mp. (2429)
20 10 and 19 (94)
21 10 or 19 (22051)
22 6 and 21 (762)
23 18 and 22 (0)
24 from 22 keep 1 (1)
25 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
26 patient transfer.mp. or Transfer, Discharge/ (2939)
27 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
28 26 and 27 (21)
29 25 or 28 (157)
30 on-call.mp. (14607)
31 29 and 30 (14)
32 limit 31 to (english language and yr=1975 - 2004) (14)
33 from 32 keep 1-10 (10)

Database: Ovid MEDLINE(R) <1966 to July Week 2 2004>

Search Strategy #2a: Value

---

1 EMTALA.mp. or "Emergency Medical Treatment and Active Labor Act"/ (138)
2 patient transfer.mp. or Transfer, Discharge/ (2939)
3 (prohibition or limit or regulation).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (357235)
4 2 and 3 (21)
5 1 or 4 (157)
6 ("avoidable deaths" or "avoidable mortality").mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (205)
7 ("preventable deaths" or "preventable mortality").mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (253)
8 6 or 7 (453)
9 5 and 8 (0)
10 delay$.mp. (184880)
11 (delay$ or defer$).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (199364)
12 cost$.mp. (195641)
13 11 and 12 (3535)
14 (avoidable or unnecessary or excess$).mp. [mp=title, original title, abstract, name of substance, mesh subject heading] (124637)
15 13 and 14 (205)
16 emergency service, hospital/ or outpatient clinics, hospital/ (29922)
17 15 and 16 (3)
18 limit 17 to (english language and yr=1975 - 2004) (3)
19 from 18 keep 1-3 (3)

Database: ISI Web of Science <1978 to July 21, 2004>

Search Strategy #1ab: Costs (from the results below, 39 records were selected as EMTALA-related; hence no further searching was done in this database).

	Results		Delete Sets
☐ #14	82	#13 OR #12 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #13	2	TS=(antidumping AND health) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #12	80	#11 OR #1 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐

☐ #11	37	#10 AND #2 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #10	5,838	#9 OR #4 OR #3 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #9	300	TS=(economic AND transfer* AND health) OR TS=(economic AND transfer* AND hospital*) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #8	79	#7 OR #1 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #7	36	#6 AND #2 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #6	5,700	#5 OR #4 OR #3 *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #5	150	TS=(economic AND transfer AND health) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐
☐ #4	118	TS=(patient AND dumping) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	☐

#3	5,452	TS=(patient AND transfer) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	
#2	>100,000	TS=(prohibition OR limit OR regulation OR law) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	
#1	43	TS=(EMTALA OR active labor act) *DocType=All document types; Language=All languages; Databases=SCI-EXPANDED, SSCI, A&HCI; Timespan=1978-2004*	

Database: Lexis-Nexis <1975 to July Week 2 2004>
Search Strategy #1c: Uncompensated
---
1 EMTALA AND Active Labor Act (166)
2 Search within results: uncompensated AND cost* (34)
3 Of these, 7 selected for detailed review

Database: Lexis-Nexis <1975 to July Week 2 2004>
Search Strategy #1d: Uninsured
---
1 EMTALA AND Active Labor Act (166)
2 Search within results: uninsured AND impact (30)
3 Of these, 3 selected for detailed review

Database: Lexis-Nexis <1975 to July Week 2 2004>
Search Strategy #1e: Non-emergency
---
1 EMTALA AND Active Labor Act (166)
2 Search within results: non-emergency (26)
3 Of these, 3 selected for detailed review

Database: Lexis-Nexis <1975 to July Week 2 2004>
Search Strategy #1f: On-call
---
1 EMTALA AND Active Labor Act (166)
2 Search within results: “on-call” (1)
3 Of these, 0 selected for detailed review

Database: Lexis-Nexis <1975 to July Week 2 2004>
Search Strategy #2a: Value of Uncompensated Care
---
1 EMTALA AND Active Labor Act (166)
2 Search within results: **avoidable deaths OR avoidable mortality OR preventable deaths OR preventable mortality** (1)
3 Of these, 0 selected for detailed review

Database: PAIS <1975 to July Week 2 2004>

Search Strategy #1a: EMTALA

---

1 Limit set to English, Years-1975-2004
2 EMTALA AND Active Labor Act (3)
3 patient dumping or patient transfer (7)
4 2 and 3 (8)

Database: Dissertation Abstracts <1975 to July Week 2 2004>

Search Strategy #1a: EMTALA

---

1 kw: EMTALA or (kw: active w labor w act) or ((kw: patient and kw: transfer)) or ((kw: patient and kw: dumping)) and yr: 1975-2004 and yr: 1975-2004 (279)
2 Of these, 8 selected for detailed review

Database: Books in Print <1975 to July Week 2 2004>

Search Strategy #1a: EMTALA

---

1 kw: EMTALA or (kw: active w labor w act) or ((kw: patient and kw: transfer)) or ((kw: patient and kw: dumping)) and yr: 1975-2004 and yr: 1975-2004 (36)
2 Of these, 10 selected for detailed review

Database: Health Affairs <1981 to July Week 2 2004>

Search Strategy #1a: ALL

Full article text searched for EMTALA (10)

Appendix C. Web Sites Used in F-1 Literature Search

Health Law/Regulation Web Sites

We began searching at Web sites known to specialize in health law and regulation generally or specific topics included in this review:

- American Health Lawyers Association
  http://www.healthlawyers.org/Ecommerce/ProductDisplay.cfm?ProductID=16717
- Findlaw.com—health law
  http://www.findlaw.com/01topics/19health/index.html (no documents found)
- Health Care Compliance Association
  http://www.hcca-info.org/ (no documents found)
- HealthHippo
  http://hippo.findlaw.com/hippohome.html (no documents found)

Health Industry Trade Organizations

Health Facilities Regulation

For health facilities regulation, we searched the following industry and state agency trade organization Web sites:

General

- Association of Health Facility Survey Agencies
  http://www.ahfsa.org/ (no documents found)
- Healthcare Financial Management Association (HFMA)
  http://www.hfma.org/ (no documents found)
- Joint Commission on Accreditation of Healthcare Organizations (JACHO)
  http://www.jcaho.org/ (no documents found)

Inpatient Hospital Facilities

- American Hospital Association (AHA)
  http://www.hospitalconnect.com/aha/press_room-info/content/EdoCrisisSlides.pdf
  http://www.ahapolicyforum.org/ahapolicyforum/resources/content/EDDiversionSurvey040421.ppt
- Federation of American Healthcare Systems (FAHS)
  http://www.fahs.com/ (no documents found)
- National Association of Public Hospitals and Health Systems (NAPH)
  http://www.naph.org/Content/ContentGroups/Publications1/MON_2000_11_CostSharingandUninsured.pdf
- National Association of Children's Hospitals & Related Institutions (NACHRI)
  http://www.nachri.org/nachri/ (no documents found)
- National Association for State Mental Health Program Directors (NASMHPD)

http://www.nasmhpd.org/ (no documents found)

- National Association of State Alcohol and Drug Abuse Directors (NASADAD)
  http://www.nasadad.org/ (no documents found)

Ambulatory Care Facilities

- Medical Group Management Association (MGMA)
  http://www.mgma.com/press/emtalacomments.cfm
- National Association of Community Health Centers (NACHC)
  http://www.nachc.com/ (no documents found)
- National Rural Health Association (NRHA)
  http://www.NRHArural.org/ (no documents found)
- Ambulatory Surgical Centers of American (ASCOA)
  http://www.ascoa.com/ (no documents found)
- National Association of Childbearing Centers (NACC)
  http://www.ascoa.com/ (no documents found)
- American Clinical Laboratories Association (ACLA)
  http://www.clinical-labs.org/ (no documents found)

State Agency Trade Organizations and Research Centers

For state agency trade organizations and health policy research centers specializing in state health policy issues not accounted for above, we searched the following Web sites:

Executive branch

- National Governors Association (NGA)
  http://www.nga.org/ (no documents found)
- National Association of State Budget Officers (NASBO)
  http://www.nasbo.org/ (no documents found)
- Association of State and Territorial Health Officers (ASTHO)
  http://www.astho.org/ (no documents found)
- National Association of Health Data Organizations (NAHDO)
  http://www.nahdo.org/ (no documents found)
- National Association of State Auditors, Comptrollers and Treasurers (NASACT)
  http://www.nasact.org/ (no documents found)

Legislative branch

- National Conference of State Legislatures (NCSL)
  http://www.ncsl.org/ (no documents found)
- Council of State Governments (CSG)
  http://www.csg.org/csg/default (no documents found)
- National Academy of Public Administration (NAPA)
  http://www.napawash.org/ (no documents found)

State Health Policy Research Centers

- National Academy of State Policy
  http://www.nashp.org/ (no documents found)

- Pew Center on the States
  http://www.stateline.org/index.do (no documents found)
- State Health Policy Web Portal Group
  http://www.hpolicy.duke.edu/cyberexchange/whats_what/state/states.htm
  Rather than search 50 individual sites, we queried by e-mail the directors of all centers included in this group for relevant reports/studies their centers had conducted or that had been conducted by agencies in their states

Health Care/Health Policy Consulting Firms

For major health care/health policy consulting firms, we searched the following sites. Some of these specialize in human resource consulting, but were included in the event they had done industry-wide studies of regulatory costs:

- Buck Consultants Inc.
  http://www.buckconsultants.com/ (no documents found)
- Deloitte & Touche
  http://www.deloitte.com/vs/0%2C1616%2Csid%25253D2000%2C00.html (no documents found)
- Ernst & Young LLP
  http://www.ey.com/global/content.nsf/US/Home (no documents found)
- Hewitt Associates LLC
  http://was.hewitt.com/hewitt/ (no documents found)
- Milliman USA Inc.
  http://www.milliman.com/ (no documents found)
- PricewaterhouseCoopers LLP
  http://www.pwcglobal.com/ (no documents found)
- Towers Perrin
  http://www.towers.com/towers/default.asp (no documents found)
- Watson Wyatt Worldwide
  http://www.watsonwyatt.com/ (no documents found)

Health Policy Research Organizations

. For major health policy research organizations, including "think tanks" and some advocacy groups, we searched the following sites:

- Abt Associates
  http://www.abtassoc.com/ (no documents found)
- Alliance for Health Reform
  http://www.allhealth.org/ (no documents found)
- AcademyHealth
  http://www.hcfo.net/pdf/findings0305.pdf
  http://www.academyhealth.org/connectingthedots/womenshealth.pdf
  http://www.academyhealth.org/connectingthedots/racialdisparities.pdf
- The Advisory Board Company
  http://www.advisoryboardcompany.com/ (no documents found – member-only site)

- American Enterprise Institute (AEI)
  http://www.aei.org/ (no documents found)
- Battelle
  http://www.battelle.org/ (no documents found)
- Brookings Institution
  http://www.brook.edu/ (no documents found)
- Cato Institute
  http://cato.org/
- Center for Budget and Policy Priorities (CBPP)
  http://www.cato.org/research/articles/ miller-coveringamerica.pdf
  http://www.cato.org/pubs/pas/pa527.pdf
- Center for Health Affairs (Project HOPE)
  http://www.projecthope.org/CHA/ (no documents found)
- Center for Health Care Strategies (CHCS)
  http://www.chcs.org/publications3960/publications_show.htm?doc_id=261617
- Center for Study of Health Systems Change (CSHSC)
  http://www.hschange.com/CONTENT/312/312.pdf
  Population Growth, Economic Downturn Stress Phoenix's Health Care Capacity
- Employee Benefits Research Institute (EBRI)
  http://www.ebri.org/ (no documents found)
- Heritage Foundation
  http://www.hschange.com/ (see above with CSHSC)
- Institute of Medicine (IOM)
  http://www.iom.edu/ (no documents found)
- Lewin Group
  http://www.Quintiles.com/Specialty_Consulting/The_Lewin_Group/default.htm
  (no documents found)
- Mathematica Policy Research (MPR)
  http://www.mathematica-mpr.com/HEALTH.HTM (no documents found)
- National Bureau of Economic Research (NBER)
  http://www.nber.org/ (no documents found)
- National Health Policy Forum
  http://www.nhpf.org/ (no documents found)
- RAND Health
  http://www.rand.org/health_area/ (no documents found)
- Research Triangle Institute (RTI)
  http://www.rti.org/ (no documents found)
- Urban Institute
  http://www.urban.org/ (no documents found)

Major Health Policy Foundations. For major health policy foundations, we searched the following sites:

- California Healthcare Foundation
  http://www.californiahealthline.org/index.cfm?Action=dspItem&itemID=89675

- Commonwealth Fund
  http://www.cmwf.org/ (no documents found)
- Robert Wood Johnson Foundation
  http://www.rwjf.org/search/allresults.jsp?query=EMTALA
- Henry J. Kaiser Family Foundation
  http://www.kff.org/medicaid/upload/48750_1.pdf
- United Hospital Fund
  http://www.uhfnyc.org/ (no documents found)